

Triple tetracycline (Deteclo) in the treatment of chlamydial infection of the female genital tract

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SUMMARY The efficacy of treating genital *Chlamydia* in women using Deteclo 300 mg twice daily for seven and 21 days has been studied. Forty-four patients were treated for seven days and 20 for 21 days. Seven days of treatment was as effective in eliminating *Chlamydia trachomatis* from the female genital tract as 21 days. The reproducibility of the technique of isolation of *C. trachomatis* was assessed by delaying treatment in 10 patients for up to 156 days and finding *C. trachomatis* still present.

Introduction

Since the isolation of *Chlamydia trachomatis* in yolk-sac culture (Jones *et al.*, 1959) evidence suggesting its pathogenicity in non-specific urethritis (NSU) has gained strength. It has been isolated in 12 to 31% of women attending venereal disease clinics (Hilton *et al.*, 1974; Hobson *et al.*, 1974; Oriel *et al.*, 1974; Burns *et al.*, 1975; Nayyar *et al.*, 1976). It has been shown that three-quarters of the women who are chlamydia-positive are asymptomatic (Nayyar *et al.*, 1976), but these women are presumed to have non-specific genital infection (NSGI). In view of the potential infectivity and recurrence of NSU in the male partner, as well as the possible complications of pelvic inflammatory disease in these patients, the authors believe that women who harbour *Chlamydia* should be treated, although there is little information on the effect of antibiotic treatment on chlamydial infection of the female genital tract.

This study was made to investigate the efficacy of tetracyclines and their optimal dosage in treatment of NSGI in chlamydia-positive women.

Patients and methods

The patients involved in this investigation attended the Sexually Transmitted Diseases Clinic at Leeds General Infirmary between October 1975 and July 1976. In all cases *C. trachomatis* was cultured on untreated McCoy cells.

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Received for publication 3 August 1976

Infection with gonorrhoea, trichomoniasis, and candidiasis was excluded by the following methods. Urethral and cervical smears were stained with Gram stain and examined for the presence of Gram-negative diplococci. Specimens for *Neisseria gonorrhoeae* from the urethra and cervix were inoculated on to modified Thayer-Martin medium and incubated at 37°C in an atmosphere of air plus 5% CO₂. High vaginal smears were stained with Gram stain and examined for the presence of Gram-positive organisms and mycelia. High vaginal specimens were also inoculated on to Sabouraud's medium. A wet preparation of the vaginal specimen was examined for the presence of *Trichomonas vaginalis* and the specimen was also cultured in Feinberg-Whittington medium.

Specimens for *C. trachomatis* were collected by rotating a cotton wool swab in the cervical canal and then breaking off the tip into a small screw-capped bottle containing transport medium (McCoy cell growth medium with 0.5% glucose and 10% sorbitol). The specimens were stored at a temperature of 4°C for three hours before being transferred to the virology laboratory. The method used for the isolation of *C. trachomatis* has been described previously (Nayyar *et al.*, 1976).

Treatment

Two groups of patients were studied. The first comprised patients attending in the first two months of the study, and the second comprised patients attending in the last four months. Both groups were given chlortetracycline hydrochloride 115.4 mg, tetracycline hydrochloride 115.4 mg, demeclo-

cycline hydrochloride 69.2 mg (Deteclo). Those in Group 1 took one tablet twice daily for 21 days, those in Group 2 took one tablet twice daily for seven days.

Reproducibility

To assess the reproducibility of the technique of isolation of *C. trachomatis*, treatment was delayed in some (arbitrarily chosen) patients, and tests for *C. trachomatis* were repeated before starting treatment. Ten entered this group; all were found to be chlamydia-positive on repeated investigation, six at seven days, and one each at 14, 21, 42, and 156 days.

Follow-up and results

In this study 75 chlamydia-positive patients were investigated. Their ages ranged from 17 to 28 years (mean 21.9) in Group 1, and from 17 to 44 years (mean 22.1) in Group 2. Eleven patients defaulted and were excluded from the study.

In Group 1, 20 patients were treated. In 10 patients chlamydial cultures were taken seven days after starting treatment, and in all patients cultures were taken seven days after treatment had finished. All gave negative results. Two patients were seen 42 and 120 days after the end of treatment and still had negative chlamydial culture results.

In Group 2, 44 patients were treated. Cultures were taken for *Chlamydia* at the end of treatment and 21 days later. All gave negative results. Four of 44 patients were examined again at 56 days and were still chlamydia-negative.

Discussion

This study shows that *C. trachomatis* persisted in the absence of any treatment in six patients for seven days, and in one each for 14, 21, 42, and 156 days. It

shows that the reproducibility of our technique was quite satisfactory, and indicates that if no antibiotic treatment is given, *C. trachomatis* persists in the female genital tract.

Triple tetracycline was successful in eradicating chlamydia whether given for seven or 21 days. These findings are consistent with those of Jawetz (1969) who reported that tetracyclines suppress chlamydial growth. The only similar study of treatment with tetracyclines of chlamydia-positive women is that of Oriel *et al.* (1975) who treated 24 patients with a semi-synthetic tetracycline, minocycline 100 mg twice daily for 21 days, all becoming chlamydia-negative by the end of treatment. In view of our findings we plan to expand this study by a longer length of surveillance after treatment.

We wish to thank Dr M. H. Hambling, Department of Virology, Public Health Laboratory Service, Leeds for his technical assistance.

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